

The Early Family-Group Names of Butterflies

By CHARLES F. COWAN *

As with genera and species, family-group names all have priorities, but these have seldom been referred to in the past. Now it is becoming fashionable to assign them authors and dates, but in the main such citations have been woefully erratic. Even the I.C.Z.N. *Official List of Family-Group Names in Zoology*, so far as it has been compiled to date, is not faultless in this respect. This is an attempt to chart the earliest and basic names, and to establish their correct status. Additions and comments will be welcomed.

First, it will be profitable to survey the early genera; those of the first fifty years will suffice.

In 1758, Linnaeus published the tenth edition of his *Systema Naturae*, from which modern zoological nomenclature dates. He divided the Lepidoptera into the genera *Papilio*, with 193 species (numbered 1-192, plus *P. podalirius*), for all butterflies, and *Sphinx* (38 species) and "Phalaena" (305) for the moths. He sub-divided *Papilio* into several sections whose names have not been adopted for genera, and he divided "Phalaena" (another name not adopted) into the subgenera *Bombyx* (58 species), *Noctua* (68), *Geometra* (75), *Tortrix* (24), *Pyrallis* (8), *Tinea* (66) and *Alucita* (6); which seven names are in use for genera now. His total Lepidoptera species numbered 536.

The wide interest generated by Linnaeus resulted in the rapid discovery of many more species, and by 1775 when Fabricius wrote his first work, the *Systema Entomologiae* (the title modelled on Linnaeus's), *Papilio* held 401 species and eleven moth genera totalled 599, to make a tidy thousand. In the moth genera, Fabricius ignored *Geometra* and *Tortrix*, included "Phalaena", and introduced the important new names *Sesia*, *Zygaena*, *Hepialis* and *Pterophorus*. He also, giving a foretaste of his independent character, substituted the name *Glossata* for Lepidoptera.

The next major work by Fabricius was his neatly named *Entomologia Systematica*, in four volumes plus a supplement and two indexes (1792-99), of which the "Glossata" occupied the two parts of volume three (1793, 1794) and 92 pages of the supplement (1798). Whereas Linnaeus needed only 824 pages to accommodate the entire Animal Kingdom in 1758, Fabricius forty years later needed ($487 + 349 + 92 =$) 928 pages for the Lepidoptera alone. And, at last, in 1793, he had to split *Papilio*, separating what are now the RIODINIDAE, LYCAENIDAE and HESPERIIDAE into his new genus *Hesperia*. Seven new new moths genera were also created; *Cossus* and *Hyblaea* (1793), and *Lithosia*, *Galleria*, *Phycis*, *Crambus* and *Ypsolophus* (1798). To complete the census, the butterflies now totalled about 1,184 and the moths 1,782 species.

* 4 Thornfield Terrace, Grange-over-Sands, Cumbria.

Meanwhile other authors had been at work on a minor scale. By 1802 at least another thirteen butterfly genera had been established in four of which, *Heliconius*, *Danaus*, *Nymphalis* and *Plebejus*, Krzysztof Kluk validated names of some of Linnaeus's informal groupings. Five; *Argyreus*, *Ascia*, *Battus*, *Graphium* and *Pterourus* were validly published by Scopoli in 1777, and four: *Cupido*, *Erynnis*, *Maniola* and *Pieris*, followed from Schrank in 1801. Among others which were soon added were *Parnassius* and *Polyommatus* Latreille, 1804 and *Satyrus* Latreille, 1810.

Finally, for this review of early genera, we must return to Fabricius and his last work. Having revised several other orders, he came back in his old age to his favourite "Glossata". But he had delayed too long, dying in 1808 when only a third of his first volume had reached proof stage. Fortunately, he had passed a copy to his friend Illiger, with permission to publish extracts in his *Magazin für Insektenkunde* (vol. 6, 1807). When, about thirteen years ago, I began to study the literature, I noticed a recent remark to the effect that "Illiger was a notorious plagiarist of other authors' works". That writer had obviously not studied Illiger, who was a scrupulous editor and punctual reviewer. His object was the diffusion of knowledge, and we owe it entirely to him that the names of "Fabricius, 1807" or more pedantically, "Fabricius, 1807 (in Illiger)" make sense, and that a major nomenclatural disaster did not occur. Those proof sheets (eventually published by Felix Bryk in 1938 when all danger was past) show that Fabricius had intended to change every specific epithet as soon as each insect's foodplant was known. The familiar *Papilio machaon* L. was now to be *P. umbellatarum*, *P. polydorus* L. became *P. aristolochiae* (nom. nov., nec. Feb. 1775!), and *P. podalirius* became *P. brassicae* (!). Under *Euploea*, Fabricius planned to change *P. plexippus* L. to *E. asclepiadis*, while under *Vanessa* he had the aptly named *P. io* L. as *V. humuli*, and *P. antiopa* as *V. betulae*. And so on throughout; a chaotic state of affairs, and with Fabricius's prestige, who knows what would have resulted?

Illiger clearly would have none of this. He published all Fabricius's useful generic diagnoses practically verbatim, and placed against each two or three of the included species under their accepted names, with no hint of the changes. This was absolutely perfect for posterity, and a fine piece of editing. It has saved for us, in Fabricius's words but without his elaborations, the diagnoses for 30 new butterfly and six new moth generic names; and it is quite wrong to say, as appears in the references section of a recent work, that these names "have sometimes been attributed to Fabricius instead of Illiger". They have always, and rightly, been treated as of Fabricius (as that same work does in its main text; e.g. *Apatura*, and *Vanessa* Fab.)

The names Fabricius planned to cover in his first volume of the *Systema Glossatorum* were numbered 1-50 but accidentally omitted number 6, so they totalled 49. Of them, only 11½ (up to the middle of *Vanessa*) were covered in the 112 proof pages in detail down to species, but generic diagnoses were given for all. Of the 49 names, five were junior homonyms, three have become junior objective synonyms, and *Papilio*, *Hesperia*, and three moths names were already established. The 36 valid new names (M indicating the six moth names were: —

Acraea	no. 25	Cethosia	7	Hipparchia	15	Morpho	5
Aegeria	M 46	Colias	23	Idea	20	Myrina	35
Amata	M 47	Cynthia	12	Laothoe	M 43	Neptis	16
Amathusia	2	Danis	38	Libythea	29	Nymphidium	37
Apatura	10	Emesis	39	Limenitis	11	Pontia	22
Argynnis	18	Euploea	9	Lycaena	33	Procris	M 50
Biblis	14	Haetera	24	Mechanitis	28	Thecla	36
Brassolis	17	Helias	41	Melanitis	19	Urania	M 1
Castnia*	M 8	Helicopis	31	Melitaea	30	Vanessa	13

* also in the misspelling "Casinia".

So far, only genera and species have been discussed and, despite the title, some moths have been included. Their names are thoroughly covered in the many reference works, so no references are given for them here. Now the scene is set for the study of the family names of the butterflies, for which full chapter and verse will be cited.

First, it will be worth glancing at the "rules". Under the International Code a family-group name must be based on the name of one of its constituent genera and be formed from its stem, with the appropriate suffix. Naturally it will be invalid if it is evident that its author has misidentified the type-genus but, failing such evidence in the original publication, it is to be assumed that he identified it correctly. A name wrongly formed, or introduced with a vernacular suffix, is not *ipso facto* invalid, but must be corrected. Once founded, a family-group name may be used in any category (superfamily, family, subfamily, tribe) with the same author and date, by employing the relevant suffix (-OIDEA, -IDAE, INAE, -INI respectively), and within any category the senior name applies to the whole.

Up to 1802 various quite elaborate systems of classification had been tried, resulting in all sorts of ingenious names. Even as late as 1876, Scudder, one of the great etomologists of his time, was writing of, for example, the "Ephori, Villicantes and Adolescentes" for the Hairstreaks, Coppers and Blues of the LYCAENIDAE. Such names were doubtless well understood in those days, when most naturalists were also classical scholars, but now they are evocative of little and lead to obscurity or confusion. Current practice is stable and preferable.

It will be noted that the highest rank covered by the Code is that of superfamily. Above that comes the order and the suborder. The order LEPIDOPTERA divides conveniently, if unscientifically, into butterflies and moths, and by 1802 these were called quite sensibly DIURNI and NOCTURNI, with

the CREPUSCULARIA separated by 1809. However, the more ponderous RHOPALOCERA (ROPALOCERIA Rafinesque, 1815: 127, ROPALOCERES Duméril, 1823: 139, 163, RHOPALOCERES Boisduval, 1832, 1: 11 and HETEROCERA (HETEROCERES Boisduval, 1833: 70) have since gained universal acceptance, and so it is the basic family-group names of the RHOPALOCERA that are our quest.

Latreille, [1803] was the first validly to subdivide the LEPIDOPTERA. He split it into six families; PAPILIONIDAE (only the corrected names will be given here), and five families of moth. Of the latter, SPHINGIDAE, BOMBYCIDAE and TORTRICIDAE are already on the I.C.Z.N. *Official List*, but PTEROPHORIDAE is there credited to Zeller, 1841, while PAPILIONIDAE is inexplicably shown as Leach, 1815. An application to rectify the last has been submitted.

It is worth examining Latreille's text text carefully, as some misquotations have occurred. Writing in French with scientific names in French and Latin, he includes two genera, *Papilio* (p.387) and *Hesperia* (p.398) in PAPILIONIDAE before going on to SPHINGIDAE (p.400). He explores *Papilio* in detail, subdividing it into seven groups and many subgroups to each of which he gives names, all of Latin nouns in the plural and often comprising two or more words. These (e.g. Equites, Danai festivi, Nymphales proprie dicti, Satyri, Parnassii, etc.) have sometimes been mistaken (notably the two last) for family-group names, but they are not even eligible as subgeneric names. Latreille was here simply continuing the traditional Linnean subgroupings, as augmented by Fabricius, 1775 with Parnassii and in 1793 with Satyri. As a generic name, *Parnassius* was validly published by Latreille in 1804. Then Fabricius, discarding his neatly named Satyrs (for the four-legged beasts, in contrast to the six-legged Chevaliers), introduced the equivalent *Hipparchia* in 1807, and Latreille in turn validated *Satyrus* in 1810. These last two genera are consequently closely related, although distinct, and both are eponyms of early family-group names.

Latreille (1809: 187, 207) then took the next logical step, by creating HESPERIIDAE, for which also an I.C.Z.N. official listing has been applied.

(to be continued)

A NOTE ON THOMAS MARTYN'S THE ENGLISH ENTOMOLOGIST (1792). — Dr. R. S. Wilkinson (1978, *Ent. Rec.*, 90: 263-264) describes in detail a unique copy of this work which is in the Michigan State University Library. I have a bound copy which collates with the one referred to by Dr. Wilkinson. Both engraved title pages are dated 1792. The dedication in the English text is dated on the last page 21.3.1793. In view of this anomaly, what was the actual date of publication? — S. C. S. BROWN, 158 Harewood Avenue, Bournemouth, Dorset.